Introduction to Environmental Science

1. What is environmental science?

2. The environment includes:
   a.
   b.
   c.
   d.

3. Environmental science is interdisciplinary because….

4. Using the example of coal-for-electricity, describe how each of these fields of study is involved.
   a. Economics –
   b. Geology –
   c. Engineering –
   d. Chemistry –
   e. Meteorology –
   f. Ecology –
   g. Politics -

Three Major Environmental Problems

5. Define renewable resource –
   a. Give one example of a renewable resource.
6. Define **nonrenewable resource** –

   a. Give one example of a nonrenewable resource.

   b. What is the estimated remaining supply of coal?

7. Define **biodegradable pollution** –

8. Define **nondegradable pollution** –

9. Mark the areas with the greatest concentrations of air pollution.

10. Define **biodiversity** –

11. Define **extinction** –

12. How many known major extinction events have occurred in the history of Earth?

   a. What caused the most recent one?
13. What is the **background rate** for mammal extinctions?

   a. How many mammal extinctions have occurred in Australia since 1788? What is the cause of these extinctions?

**Environmental Ethics**

14. What is **environmental ethics**?

15. What does **anthropocentrism** mean? Describe the philosophy.

16. What does **ecocentrism** mean? Describe the philosophy.

17. The proposed Hetch Hetchy dam was the first big debate between anthropocentrists and ecocentrists. Explain what each group wanted to do.

   **Anthropocentrists** -

   **Ecocentrists** -

18. Was the dam constructed? Describe the reasoning. What environmental ethics philosophy aligns with this reasoning?

19. What was the focus of the **resource conservationism** philosophy?

   a. What two federal systems were created during this time?

20. Two events lead to the beginning of the **modern environmentalism** movement. What were they?

   a. What is the primary concern of modern environmentalists?
21. What is **global environmentalism**?

**The Tragedy of the Commons**

22. The *Tragedy of the Commons* essay describes the source of environmental problems as…

23. What is a **commons**?
   
a. What tends to happen to commons areas?

   b. What are modern examples of commons areas?

**Economics and the Environment**

24. Define **supply-and-demand** –
   
a. Give an example.

25. Define **cost/benefit analysis** –
   
a. Give an example.

26. Describe the conditions found in a **developing country**.

27. Describe the conditions found in a **developed country**.

28. Which type of country has the smaller population size? Which consumes more resources?
29. Compare and contrast developing and developed countries:

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<thead>
<tr>
<th></th>
<th>Developed United States</th>
<th>Developing Indonesia</th>
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<tbody>
<tr>
<td>Life expectancy</td>
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<td>Waste Creation</td>
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30. What factors are considered when calculating an ecological footprint?

31. What is sustainability?

32. Sustainability is important because the Earth is a **closed system**. What does this mean?